



Cowlitz Indian Tribe

July 20, 2015

Mr. Peter Contreras
EPA Region 10, Ground Water Unit
1200 6th Avenue, Suite 900
Seattle, WA 98101

Re: Request for Approval, Class V Injection Well – Cowlitz Indian Tribe

Dear Mr. Contreras:

As a follow-up to our meeting on May 13, 2015, the Cowlitz Indian Tribe is submitting to EPA and IHS the Final Feasibility Study for an on-site wastewater treatment and disposal system using vadose zone injection wells. The Cowlitz Indian Tribe asks for EPA's approval of the proposed Class V Injection Well to be Rule Authorized under the EPA Underground Injection Control (UIC) Program.

The proposed system will consist of a water reclamation plant using membrane bioreactor technology capable of producing Class A reclaimed water, denitrification (below 10 mg/L), and 12-inch diameter (casings) vadose zone injection wells 60 to 160 feet in depth. The initial treatment capacity will be sized for 200,000 gpd maximum monthly flow (MMF) or approximately half of the total flow anticipated from buildout of the 152-acre site (390,000 gpd MMF). Based upon work complete, the injection well system is feasible using native soils for both the initial casino resort construction and the buildout of the site. The system has a vadose zone of 120 feet between the bottom of the injection wells (160 feet deep) and the groundwater below (280 feet deep). It is predicted that it will take approximately 6 months for injected water to enter the groundwater once injected into the vadose zone and approximately 4 years from the time that injected water leaves the well until it reaches the edge of the property. Layout of the well field has been included in the Final Feasibility Study, including locations of monitoring wells for your review.

We have also provided preliminary plans for the water reclamation plant and injection well field (approximately 30 percent complete) so that you may review our progress and the finer details of the system. There are a few of the fine points that we would like to bring to your attention:

- The design includes both UV and sodium hypochlorite disinfection; however, the Cowlitz Indian Tribe is requesting that the disinfection system be limited to sodium hypochlorite (intended to have 0.5 mg/L minimum chlorine residual) to limit biological growth in the injection wells and to facilitate reuse of the water inside of the casino resort and for other non-potable uses. We request your concurrence in using a sodium hypochlorite system only without UV disinfection.
- The design includes the necessary equipment, features, and delivery system to maximize reuse of water such as flushing toilets, washing machine water, makeup water for air-conditioning units,

and irrigation during summer months. The reuse system will be able to reduce the average annual volume of water to be injected into the vadose zone.

As we discussed with you in May, the Cowlitz Tribe has a very large investment in the casino resort and associated improvement (on-site treatment, new highway interchange, and additional infrastructure improvements) which are nearing construction. It is critical to the Tribe to understand if this system as proposed would be authorized by rule as a Class V injection well by Region 10. We would request your preliminary concurrence within the next 2 to 4 weeks if possible. If there is additional information that you need for your evaluation, please do not hesitate to ask.

Regards



Mr. Bill Iyall *PE*
Chairman Cowlitz Indian Tribe

Enclosures

cc: Mr. Steven Anderson IHS/DES
Mr. Derek Schruhl, EPA
Mr. Mike Ollivant, Parametrix